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09/707,050	11/06/2000	Miyuki Enokida	B588-015	8306

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COWAN LIEBOWITZ & LATMAN P.C
JOHN J TORRENTE
1133 AVE OF THE AMERICAS
1133 AVE OF THE AMERICAS
NEW YORK, NY 10017

EXAMINER	
LE, BRIAN Q	

ART UNIT	PAPER NUMBER
2623	

DATE MAILED: 05/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/707,050	ENOKIDA ET AL.	
	Examiner	Art Unit	
	Brian Q. Le	2623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 December 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3,5,8-12,16,18,20,23-27 and 31-34* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1, 3, 5, 8-12, 16, 18, 20, 23-27 and 31-34* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Response to Amendment and Arguments

1. Applicant's amendment filed December 27, 2004, has been entered and made of record.

2. Applicant's arguments with regard to claims 1, 3, 5, 8-12, 16, 18, 20, 23-27 and 31-34 have been fully considered, but are not considered persuasive because of the following reasons:

Regarding claim 1, the Applicant argues (page 12) that Sato U.S. Patent No. 6,246,804 does not teach the setting a weight value for each of the plurality of segmented regions based on each ratio of a size of a designated arbitrary region included in the segmented region to a size of the arbitrary region. The Examiner respectfully disagrees. Sato teaches the setting a weight value (since a weight value is so broad; it can be interpreted as the setting of similarity value of the designed image) (FIG. 52, S238 and column 29, lines 18-21) of each of the plurality of segmented regions (since this is a processing of dividing the designated image into regions and thus the processing of each single region would clearly indicate the processing of each of the plurality of segmented regions of the designated image) (FIG. 2 and Abstract) based on each ratio of a size of a designated arbitrary region included in the segmented region to a size of the arbitrary region (Sp/Sc and the processing area of the image over the entire image) (FIG. 52, S236; and column 28, lines 15-22, 36-45, 64-68). Thus, it is clear that Sato teaches a concept of setting a weight value of each segmented region of the source image. In addition, the Applicant argues (page 13) that Sato does not disclose the comparing the area of the arbitrary region to the total area of the arbitrary region. Again, Sato clearly teaches this concept at column 28, lines 15-22 and 36-45). (Also, the term "arbitrary region" is also broadly claimed. It is clearly can be interpreted as the comparing of the processed area to the entire/total area of the designated image). Applicant's arguments are directed toward various portions (FIG.4) of Sato cited by the

Examiner. The Examiner points out that the rejections were based upon the entire reference. Therefore, Applicant is urged to consider the reference as a whole. When considering the cited portions within context the whole patent, it is seen that the claimed invention is rendered obvious. Also as indicated in the previous Office Action, the invention the Applicant perhaps is different from the cited arts the Examiner. However, the Applicant must clearly claim, and specify the novelty of the invention in a specific claim's language for narrow and specific interpretation.

Thus, the rejections of all of the claims are maintained.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 1, 3, 5, 8-12, 16, 18, 20, 23-27 and 31-34 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Regarding the independent claims 1, 16, 31, and 34, the amended limitation "a first calculating step of calculating, for each of the plurality of segmented regions, a ratio of a size of the designated arbitrary region included in the segmented region to a size of said arbitrary region" is not disclosed in the original specification. The ratio concept supported in the specification page 20-21 is totally different of what is claimed. The Applicant need to show the support (page number and line number) of this amended limitation.

Thus, the amended limitation "a setting step for setting a weight value of each of the plurality of segmented regions based on each ratio calculated in the first calculating step" is not supported in the original disclosure since "the first calculating step" is not supported in the original disclosure.

Claims not specifically addressed depend from indefinite antecedent claims.

5. Claims 1, 16, 31 and 34 are objected to because these claims are very difficult to understand due to the use of confusing language. Appropriate correction is required. The prior art rejection based on the Examiner's best understanding.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 1, 3, 5, 8-12, 16, 18, 20, 23-27 and 31-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Lipson U.S. Patent No. 6,463,426 and Sato U.S. Patent No. 6,246,804.

Regarding claim 1, Lipson teaches an image search method of searching for a desired image from a plurality of images stored in storage means (abstract), comprising:

A designation step of designating an arbitrary region in a search source image (particular regions of the image) (abstract);

A segmenting step of segmenting the search source image into a plurality of segmented regions (FIG. 3, element 42);

A calculation step of dividing the search source image and each of the plurality of images stored in the storage means into the plurality of segmented regions, performing similarity calculation in units of the segmented regions to obtain similarity for each of the segmented regions between the designated search source image and each of the plurality of images stored in the storage means (generate scores in similarity calculation) (FIG. 5; FIG. 7B; FIG. 11, element 234), and calculating image similarity between a search source image and each of the plurality of images on the basis of the similarity for each of the segmented regions calculated in the first calculation step and the weight value set in the setting step (FIG. 7B, elements 162 and 164); and

An acquisition step of acquiring an image as a search result from the plurality of images on the basis of the image similarity calculated in the second calculation step (FIG. 7B, elements 168 and 170).

However, Lipson does not clearly teach the setting step of setting a weight value for each of the plurality of segmented regions based on each ratio of a size of a designed arbitrary region included in the segmented region to a size of the arbitrary region. Sato teaches a method of retrieving and searching images (abstract) applying a method of setting step of setting a weight value (since a weight value is so broad; it can be interpreted as the setting of similarity value of the designed image) (FIG. 52, S238 and column 29, lines 18-21) of each of the plurality of segmented regions (since this is a processing of dividing the designated image into regions and thus the processing of each single region would clearly indicate the processing of each of the plurality of segmented regions of the designated image) (FIG. 2 and Abstract) based on each ratio of a size of a designated arbitrary region included in the segmented region to a size of the arbitrary region (Sp/Sc and the processing area of the image over the entire image) (FIG. 52,

S236; and column 28, lines 15-22, 36-45, 64-68). Modifying Lipson's method of searching and retrieving desired images according to Sato would able to enhance the searching and retrieving capability by assigning values to size of interested region of the image to further increase higher accuracy and increase the searching speed by limiting the number of images to be search. This would improve processing and therefore, it would have been obvious to one of the ordinary skill in the art to modify Lipson according to Sato.

For claim 3, Lipson discloses the method wherein said method further comprises the drawing step of allowing an operator to interactively draw an image, and the search source image is the image drawn in the drawing step (Microsoft Paint Package with the graphical user interface would allow the user to draw search source image so it can be searched in the database) (column 7, lines 22-26).

For claim 5, Lipson also teaches the method wherein the second calculation step comprises a step of integrating the weighted similarities for the segmented regions to obtain the image similarity (the process of generating similarity between each of the primary image region and the target image region and the process of combining the similarity scores together, sort them and generate result to obtain the final image similarity) (FIG. 5; FIG. 7B; FIG. 11 and FIG. 11A).

Regarding claim 8, Lipson teaches the method further comprising a display step of displaying on a display screen (column 23, lines 60-65) an image representing the image acquired in the acquisition step as the search result (FIG. 1, element 16).

For claim 9, Lipson teaches the method wherein the display step comprises displaying a thumbnail image of the image acquired in the acquision step (FIG. 1A, element 20).

Referring to claim 10, Lipson further discloses the method wherein the display step comprises displaying an icon image corresponding the image acquired in the acquisition step (FIG. 1A).

Also for claim 11, Lipson also teaches the method wherein the display step comprises, when one of displayed images is selected, displaying details of an image linked to the image (FIG. 1A).

In addition to claim 12, Lipson discloses the method wherein the display step comprises displaying extracted images in an order of similarities (FIG. 1A).

For claims 16, 18, 20, and 23-27, please refer back to claims 1, 3, 5, and 8-12 respectively for the explanations.

Regarding claim 31, please refer back to claim 1 for the explanation.

For claim 32, Sato also teaches the method wherein the setting step, the weight value of each segmented region is set based on a ratio of the designated arbitral region to the segmented region (FIG. 47, element S213 and S214 and FIG. 52, S236).

For claim 33, please refer back to claim 32 for the explanation.

Regarding claim 34, please refer back to claim 1 for the explanation.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Contact Information

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian Q Le whose telephone number is 571-272-7424. The examiner can normally be reached on 8:30 A.M - 5:30 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amelia Au can be reached on 571-272-7414. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9306 for regular communications and 703-872-9306 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

SAMIR AHMED
PRIMARY EXAMINER

BL
April 26, 2005